IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 2, No. 5, September 2021
Page 565-579

Development of Learning Tools Based on *Mind Mapping* Worksheet for Improving Stundents' Creative Thinking Skills on Cell Material

Ainul Badriyah[1], Sri Poedjiastoeti[2], Yuliani[3]
[1,2,3]Universitas Negeri Surabaya, Surabaya, Indonesia

DOI : https://doi.org/10.46245/ijorer.v2i5.154

Sections Info
Article history:
Submitted: August 21, 2021
Final Revised: September 20, 2021
Accepted: September 28, 2021
Published: September 30, 2021
Keywords:
worksheet
mind mapping
creative thinking skills

ABSTRACT

Life skills-based education is an important tool to face today's global demands, one of which is creative thinking skills. This study aims to determine the feasibility of learning tools based on *mind mapping* worksheet to practice creative thinking skills for class XI MIPA on cell material, which are viewed in terms of (1) validity, (2) practicality and (3) effectiveness. The learning tools developed are syllabus, lesson plans, LKDP and tests of creative thinking skills. The *mind mapping* worksheet that was trained included indicators of creative thinking skills, fluency, flexibility, originality and elaboration, which were tested on 23 students Class XI MIPA SMA Al-Islam Krian. This study used a 4D design with one group pretest-posttest design, the data obtained were analyzed descriptively. The results of the validity of the device get mode 4 with a very valid category. The results of the practicality of the device were carried out with mode 4 in the very good category. The effectiveness of the device is based on the average N-gain score ranging from 0.5 to 0.92. The result of students' mastery of the concept of the material is 86.3 in the complete category. Students' responses to the four LKPD mind mapping developed were 81% in the positive category.

INTRODUCTION

Life skills-based education, one of which is creative thinking skills, is an important means to prepare for global demands. A proper learning tool both theoretically and empirically is needed to train creative thinking skills. Creativity is a product of creative thinking. Creative thinking skills through *mind mapping* can assemble mental abilities that involve cognitive processes, personality characteristics, and environmental variables, as well as the interaction of other components to generate ideas that are useful in problem solving (Eratay, 2017). Learning through mind mapping strategies makes a positive contribution to the development of math and science skills (Polat et al., 2017). *Mind mapping* strategies in learning can activate the right and left brain lobes, meaningful and efficient learning, facilitate memory, become a form of practical presentation that is prepared in a short time, and increase students' interest, attention and motivation (Erdem, 2017).

The concept of the cell requires a constructed understanding of the process of assimilation to equilibration through a molecular approach to life phenomena related to the structure, function, and interrelationships between cell structure and function (Heni et al., 2017) Very broad cell material requires students to understand all learning content. A creative thinking learning device is needed to make it easier for students to

6._154-Article_Text-1418-1-15-20210920.doc

ORIGINALITY REPORT

19%	15%	12%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	E Guswanto, Susanto, Hobri, P A Inawati, A R Sya'Roni. "Scientific approach learning implementation based on lesson study for learning community in solving sequence and series and its effect to student creative thinking ability", Journal of Physics: Conference Series, 2020 Publication	2%
2	Submitted to Universitas Negeri Surabaya The State University of Surabaya Student Paper	2%
3	www.ijsrp.org Internet Source	1%
4	repository.unpak.ac.id Internet Source	1%
5	pt.scribd.com Internet Source	1%
6	iosrjournals.org Internet Source	1%
7	digilib.iain-palangkaraya.ac.id	